WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a first MOSFET designed to have a threshold level which is relatively lower, the first MOSFET having a first gate oxide film;

a second MOSFET of an n-type designed to have a threshold level which is relatively higher, the second MOSFET having a second gate oxide film thicker than the first gate oxide film; and

a third MOSFET of a p-type designed to have a threshold level which is relatively higher, the third MOSFET having a third gate oxide film which is thicker than the first gate oxide film and is thinner than the second gate oxide film.

2. A semiconductor device as claimed in claim 1, wherein the second and third MOSFETs cooperate with each other and form a complementary MOS circuitry.

3. A method for fabricating on a semiconductor substrate a semiconductor device as claimed in claim 1, the method comprising:

forming an isolation region within the semiconductor substrate and close to a surface of the semiconductor substrate to define a first region for the first MOSFET and a second region for the second and third MOSFETs;

selectively implanting fluorine ions into a first part of the second region with a first ion-implantation condition, the first part of the second region being for the second MOSFET, the first ion-implantation condition being determined to form the second gate oxide film;

selectively implanting fluorine ions into a second part of the second region with a second ion-implantation condition, the second part of the second region being for the third MOSFET, the second ion-implantation condition being determined to form the third gate oxide film;

simultaneously growing oxide films on and over the first and second regions of the semiconductor substrate; and

forming the first to third MOSFETs by using the simultaneously grown oxide films, so that the first to third MOSFETs have the first to third gate oxide films, respectively.

4. A fabricating method as claimed in claim 3, wherein the first and second ion-implantation conditions are determined so that the third gate oxide film is thinner the second gate oxide film.

5. A fabricating method as claimed in claim 4, wherein the first ion-implantation condition comprises first dosage of fluorine ions and predetermined implantation energy, while the second ion-implantation condition comprises second dosage of fluorine ions and the predetermined implantation energy, the second dosage being less than the first dosage.

6. A fabricating method as claimed in claim 5, wherein the first dosage is of 7.0×10^{14}-$1.2\times10^{15}/cm^2$ inclusive, and the predetermined implantation energy is 5keV.

7. A fabricating method as claimed in claim 6, wherein the second dosage is equal to or below $6.0\times10^{14}/cm^2$.

8. A fabricating method as claimed in claim 4, wherein the first ion-implantation condition comprises predetermined dosage of fluorine ions and first implantation energy, while the second ion-implantation condition comprises the predetermined dosage of fluorine ions and second implantation energy, the second implantation energy being higher than the first implantation energy.

9. A fabricating method as claimed in claim 8, wherein the predetermined dosage is $6.0\times10^{14}/cm^2$, and the first and second implantation energies are 3keV and 5keV, respectively.

10. A fabricating method as claimed in claim 4, wherein the first and second ion-implantation conditions are further determined so that the second and third MOSFETs have gate-channel leakage current characteristics substantially equal to each other.

11. A fabricating method as claimed in claim 10, wherein the first and second ion-implantation conditions are further determined so that standby current in the second and third MOSFETs do not depend on the gate-channel leakage current characteristics but on subthreshold characteristics of the second and third MOSFETs.

12. A fabricating method as claimed in claim 3, further comprising:

before the selectively implanting fluorine ions into the first part of the second region, forming P-well as the first part within the second region; and

before the selectively implanting fluorine ions into the second part of the second region, forming N-well as the second part within the second region.

13. A fabricating method as claimed in claim 12, wherein the forming P-well is carried out by selectively implanting boron ions into a part of the second region that becomes the first part.

14. A fabricating method as claimed in claim 12, wherein the forming N-well is carried out by selectively implanting phosphorus ions into a part of the second region that becomes the second part.

15. A fabrication method as claimed in claim 3, wherein the forming the isolation region is carried out in LOCOS (Local Oxidation on Substrate) process.

16. A fabricating method as claimed in claim 3, wherein the forming the isolation region is carried out in STI (Shallow Trench Isolation) process.

17. A fabricating method as claimed in claim 3, wherein the simultaneously growing oxide films is carried out in single thermal oxidation process.